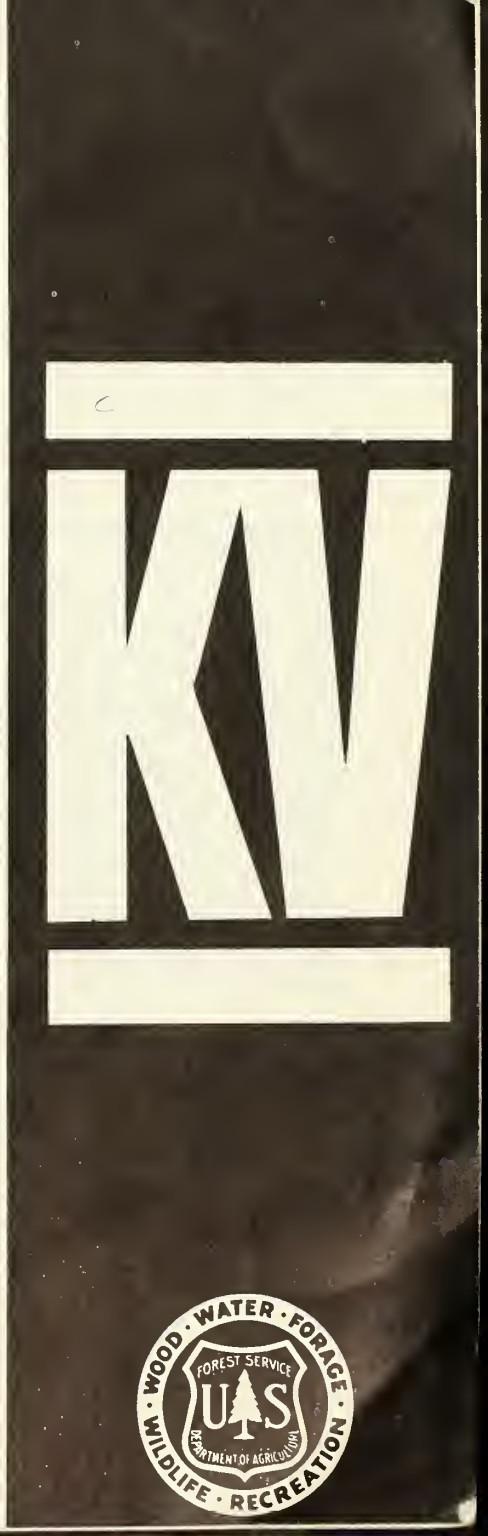
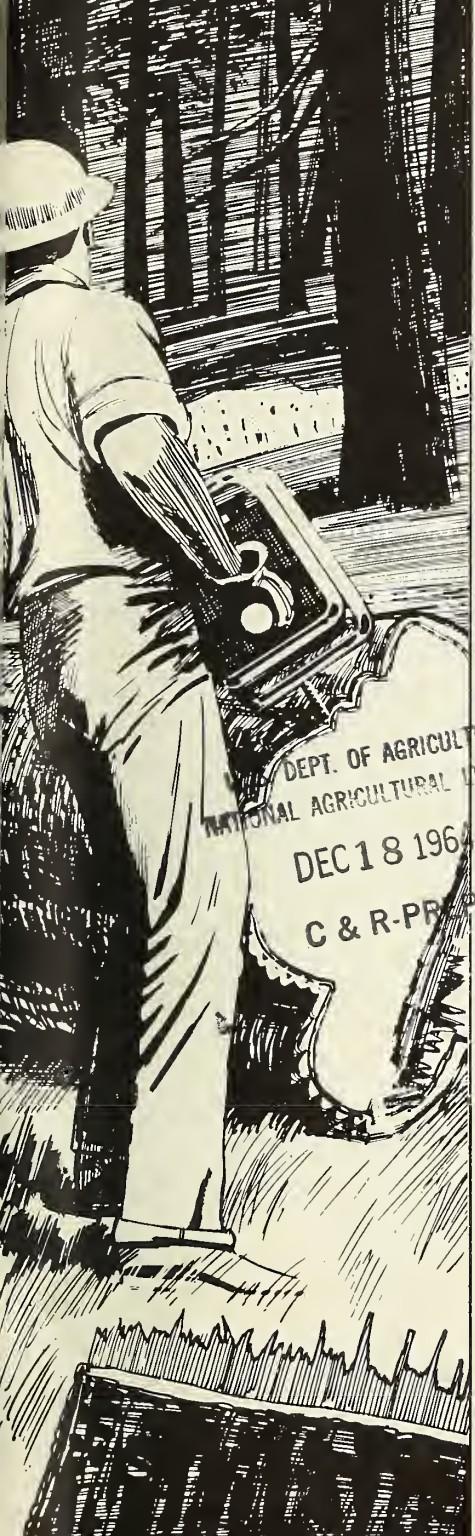


## **Historic, Archive Document**

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U.S. DEPARTMENT  
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In 1930, Congress passed a law to insure continuing timber production on cutover National Forest timberlands. The Knutson-Vandenberg Act was designed to help the U.S. Forest Service accomplish aims stated by Congress; that is, secure favorable conditions of water flow, and to improve and protect the forests.

Congress recognized that continued harvesting of timber would lead to depletion of timber supplies and curtailment of the timber-using industries unless action was taken to insure prompt, continuing regrowth of high quality trees on cutover lands. To provide such regrowth, silvicultural or "forest farming" practices are needed. To finance these practices, the Act provides for reinvestment of a portion of the cash value of the crops harvested from National Forest timber sale areas. The silvicultural practices made possible on public land by the Knutson-Vandenberg method of financing are very similar to the "tree farming" practiced by progressive owners of private timber holdings. Both private and public land managers recognize the need to insure future supplies of timber. They recognize that good timber management requires the re-establishment of a new crop within a few years after each harvest.

Under the K-V Act, a portion of the receipts from National Forest timber sales may be withheld to cover the cost of starting a replacement crop or improving growing conditions of the trees on the area. This Act states, "The Secretary of Agriculture may, when in his judgment such action will be in the public interest, require any purchaser of National Forest timber to make deposits of money in addition to the payments for the timber, to cover the cost to the United States of (1) planting (including the production or purchase of young trees), (2) sowing with tree seeds (including the collection or purchase of such seeds), or (3) cutting, destroying, or otherwise removing undesirable trees or other growth, on the National Forest land cut over by the purchaser, in order to improve the future stand of timber . . ."



## DETERMINATION OF NEED

Cutover forests do not automatically yield a new crop of trees of desirable species, good form, and quality. Prompt natural regeneration may be defeated by lack of seed, drought, excessive heat, frost heaving, rodents, undesirable ground cover, or other adverse factors. Seeding or planting, usually preceded by ground preparation, is frequently necessary if a new crop is to be established without delay.

Once new trees are established, either by natural or artificial means, they need such care as weeding, thinning, pruning, protection from fire, insects, and disease to improve the rate of growth and timber quality.

The type and amount of needed K-V work on each proposed sale area is determined by foresters who make the presale inventory. Each sale, or subunit of a sale, has its own characteristics and may require different treatment. The timber type, age, composition, soil characteristics and steepness of slope, all help determine which silvicultural practices may be necessary. On some sale areas these may be determined very accurately in advance of timber harvest. On other areas plans must be modified following cutting as conditions dictate changes to be made.

*Clearcut blocks from which mature timber has been harvested – the first step in forest management.*

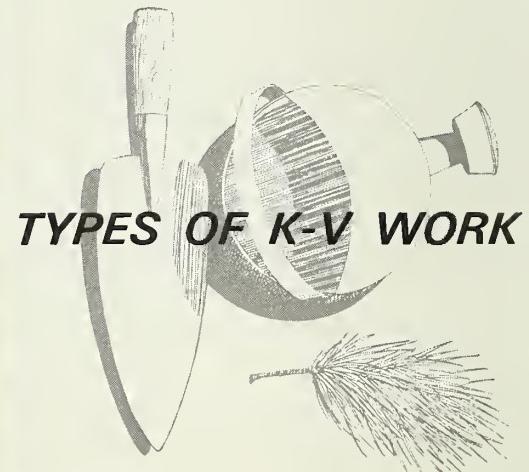




### Seedbed and Site Preparation

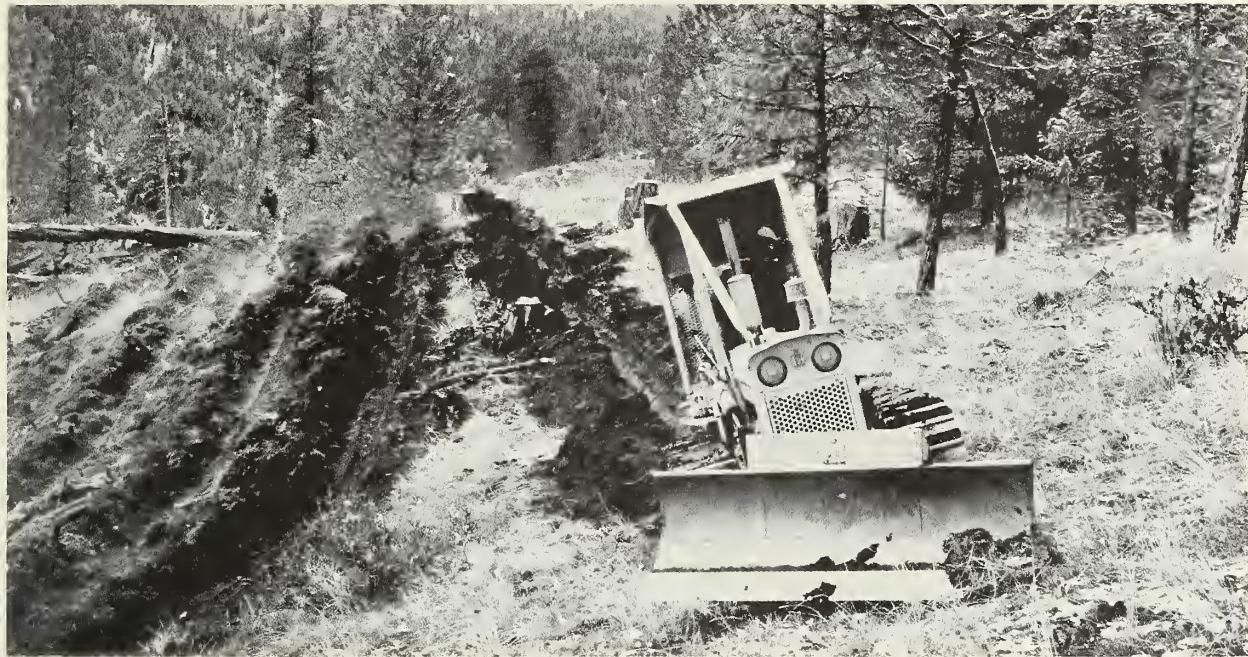
Controlled burning is one method of seedbed preparation after logging. Such burning removes competing vegetation and material which would mechanically interfere with seeding or planting operations. Controlled burning may be successfully done on slopes too steep for seedbed preparation with machines.

*Controlled Burn*



*Machine Scarification*

Another method of seedbed preparation after logging is scarification with machines. The purpose of scarification is much the same as in controlled burning — to prepare the area for natural or artificial seeding or tree planting by removing competing vegetation and debris and exposing mineral soil.



## Seedbed and Site Preparation

On steep terrain seedbed or site preparation may include terracing or contour furrowing to prevent erosion and improve growing conditions. On such areas, trees are planted in the furrow to gain shade and moisture advantages.

*Contour Furrowing with Plow*



## TYPES OF K-V WORK

*Power Spraying with Chemical Weed Killers*

Occasionally, logged over areas must be sprayed with weed killers such as 2, 4-D or 2, 4, 5-T to remove competing vegetation or currant and gooseberry bushes — the alternate host for white pine blister rust disease.

## TYPES OF K-V WORK



Drill Sowing White Pine Seed

### PLANTING

Trees for planting logged over timberlands are grown in forest nurseries. From two to four years are required to grow trees to a size that will survive when field planted.



Broadcast Sown Ponderosa Pine Seedlings

## **TYPES OF K-V WORK**



*Tree Planting with Machine*

### **PLANTING**

Planting offers the opportunity to establish vigorous trees of the species best adapted to the site and at spacing intervals that permit a good rate of growth. Planting by hand is necessary in steep or rough terrain. Where ground conditions are suitable, machine planting reduces costs.



*Hand Planting Trees*



## **TYPES OF K-V WORK**

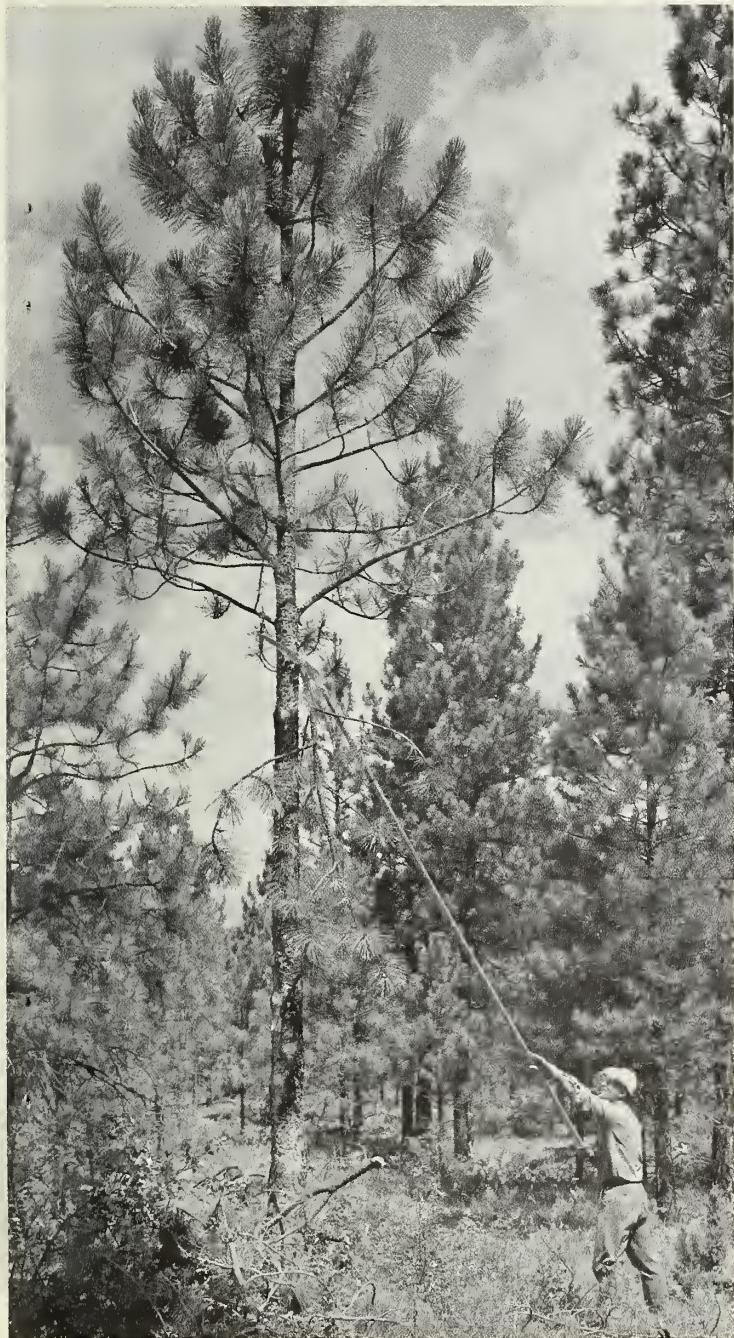
**Improving Growing Conditions.** Occasionally, when conditions are just right, the number of tree seedlings established naturally is far too great to permit good growth. Trees must have room to grow. Dense stands must be thinned or competition for sunlight, water, and food will result in major growth loss or prolonged stagnation. Thinning also affords an opportunity to retain selected trees of the most desirable species.

*Heavily Overstocked Stand*



*Same Stand After Thinning*

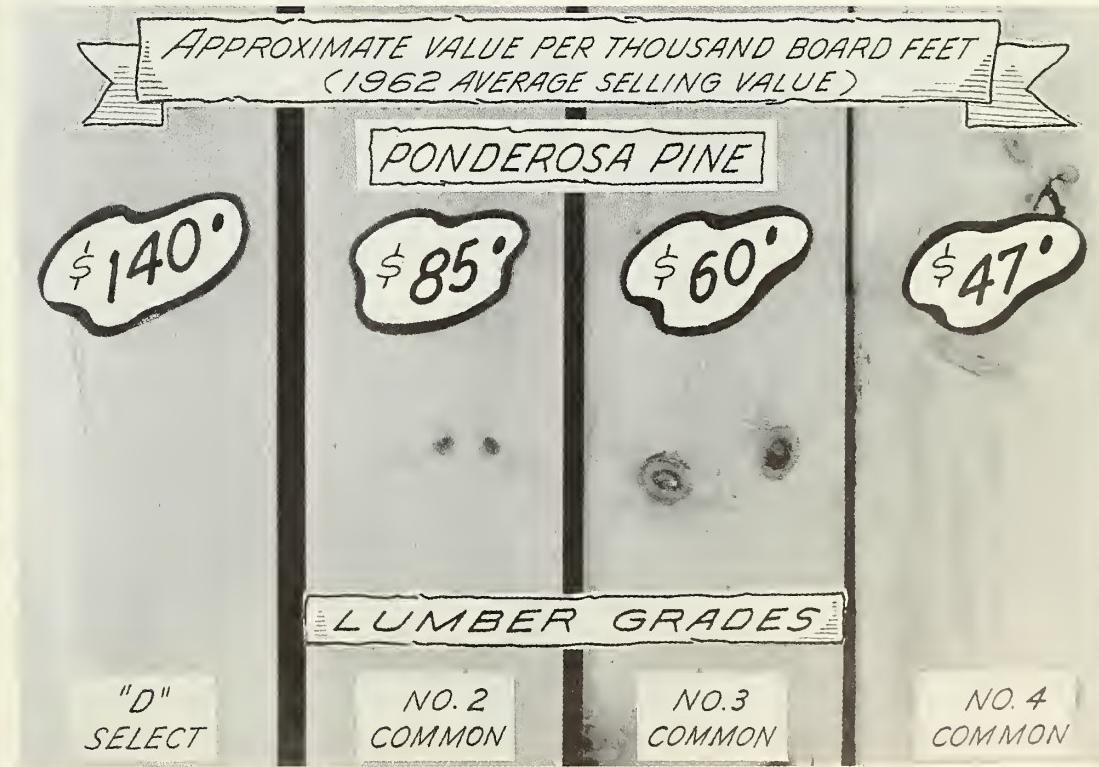




## TYPES OF K-V WORK

*Pruning Limbs from Ponderosa Pine Tree*

*The Effect of Knots on Lumber Quality*





*Felling Mistletoe Infected Lodgepole Pine*

*Forest worker applying antibiotic solution.*



**Disease Control.** Blister rust disease is arrested and controlled in valuable western white pine trees by applying antibiotics.

Trees infected with mistletoe, a parasitic plant growth, are felled to remove the source of infection for surrounding trees.

K-V funds are a portion of the receipts from sale areas reinvested in the timber resource for public benefit. All K-V collections are governed by presale reports of needs of the area. Plans for post harvest management practices described in these presale reports are prepared annually for each Ranger District. These plans outline needed work on each timber sale area on which K-V funds have been collected. Presale plans may be modified following cutting, if necessary. For example, if satisfactory natural regeneration occurs on areas planned for planting.

Expenditures of K-V funds often lag several years behind collections. Planting operations must be delayed until after the slash is burned and the site prepared. Thus, the unexpended balances in local K-V accounts will vary, depending on the readiness of cutover land for treatment and on the volume and value of timber sales in any given period. K-V deposits may be held up to five years, depending on the type of work to be done. Holding such funds beyond this period may be done only with advance approval of the Regional Forester. K-V funds in excess of the actual cost of doing the work are transferred to the U.S. Treasury.

The Forest Service is strictly bound by the limit specified in the K-V Act as to collections from any sale area. The amount of money withheld for K-V purposes from timber receipts can never exceed, on a cutover acreage basis, the average cost of planting other comparable National Forest lands during the previous three years. K-V money also cannot be collected in excess of the needs of the area. K-V money cannot be spent on sale areas from which none was collected or on timber stand improvement work on nonsale areas.



## **THE K-V INVESTMENT**

## **THE CONTRIBUTION OF K-V TO THE LOCAL ECONOMY**

K-V funds are spent within the counties where the timber sales took place. K-V funds are used primarily for labor, equipment use, and supplies. Such funds play a dual role in contributing to the local economy, by:

(1) Providing immediate economic benefits in the form of wages, equipment rental, and the purchase of supplies.

(2) Assuring long range economic benefits by the creation or improvement of stands of quality timber.

*Tree Planting Crew in Action*



*Forester Marking a Stand for Thinning.*



## **IN BRIEF**

The Knutson-Vandenberg Act is a farsighted provision by congress for the present and future management of one of the nation's prime natural resources—timber.

As consumer demands for products increase, so must the measures that will insure continuing supplies of timber. In this light K-V can be compared to business insurance. It helps guarantee the future of the wood using industry and consequently helps maintain and expand the local tax base. By providing a continuing flow of high quality timber products, K-V assures a

continued return to the counties from the 25 percent fund.\*

Forest land management practices, financed by the K-V Act or other sources, prevent economic losses brought on by a dwindling source of raw material or increasing use of expensive wood substitutes. Thus, the K-V program operates for the present and future social and economic benefit of individuals and industry, the States and the Nation.

*\*Twenty-five percent of the receipts from the National Forests are returned to the counties in which they are collected for support of schools and roads.*



